

## CLAIMS

1. A method for producing  $\alpha$ -hydroxycarboxylic acid, which comprises hydrolyzing cyanohydrin in the presence of a hydrocarbon solvent.
2. The method for producing  $\alpha$ -hydroxycarboxylic acid according to claim 1, which comprises separating and removing the hydrocarbon solvent phase from a reaction solution after hydrolysis reaction.
3. The method for producing  $\alpha$ -hydroxycarboxylic acid according to claim 1, wherein the hydrolysis reaction is carried out using mineral acid.
4. A method for producing optically active  $\alpha$ -hydroxycarboxylic acid, which comprises: producing optically active cyanohydrin by performing a reaction between a carbonyl compound and hydrogen cyanide, using a solvent comprising at least one organic solvent selected from a group consisting of an alcoholic solvent, an ester solvent, an ethereal solvent and a carboxylic solvent; removing said organic solvent from said reaction solvent; and hydrolyzing the remaining reaction mixture without isolating optically active cyanohydrin.
5. The method for producing optically active  $\alpha$ -hydroxycarboxylic acid according to claim 4, wherein the amount of said organic solvent in the reaction mixture subjected to hydrolysis is less than 10 weight %.
6. The method for producing optically active  $\alpha$ -hydroxycarboxylic acid according to claim 4, wherein the hydrolysis reaction is carried out using mineral acid.
7. A method for producing optically active  $\alpha$ -hydroxycarboxylic acid, which comprises hydrolyzing optically active cyanohydrin, using at most 10 equivalents

of mineral acid relative to said optically active cyanohydrin under the condition that maximum temperature when reacting is 90°C or less.

8. A method for producing optically active crystalline  $\alpha$ -hydroxycarboxylic acid, which comprises crystallizing optically active  $\alpha$ -hydroxycarboxylic acid in an aqueous solution.
9. The method for producing optically active crystalline  $\alpha$ -hydroxycarboxylic acid according to claim 8, which comprises crystallizing optically active  $\alpha$ -hydroxycarboxylic acid in the presence of a non-miscible organic solvent.
10. An optically active crystalline chloromandelic acid, which is obtained by the production method according to claim 8.
11. A method for producing optically active crystalline  $\alpha$ -hydroxycarboxylic acid, which comprises crystallizing optically active  $\alpha$ -hydroxycarboxylic acid obtained by the method according to claim 1, in an aqueous solution.
12. A method for producing optically active crystalline  $\alpha$ -hydroxycarboxylic acid, which comprises crystallizing optically active  $\alpha$ -hydroxycarboxylic acid obtained by the method according to claim 4, in an aqueous solution.
13. A method for producing optically active crystalline  $\alpha$ -hydroxycarboxylic acid, which comprises crystallizing optically active  $\alpha$ -hydroxycarboxylic acid obtained by the method according to claim 7, in an aqueous solution.